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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/659,225  
Filing Date: September 10, 2003  
Appellant(s): PEARSON ET AL.

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Mark L. Davis  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed December 4, 2007 appealing from the Office action mailed October 18, 2007.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

Appellant's brief presents arguments relating to the cancellation of claims drawn to a non-elected invention and/or species. This issue relates to petitionable subject matter under 37 CFR 1.181 and not to appealable subject matter. See MPEP § 1002 and § 1201.

The appellant's statement relevant only to the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

Harashina et al., US Patent No. 7,115,677.

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 53, 59, 65-69 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harashina et al, U. S. Patent No. 7,115,677.

Harashina et al discloses a flame-retardant resin composition comprising:

10 to 300 parts by weight of a flame retardant (B)

1 to 200 parts by weight of inorganic glass fiber and/or glass flake filler (C)

100 parts by weight of a base resin (A)

More specifically, the patented invention includes a flame-retardant resin composition comprising at least one polyester-series resin (A).

The flame retardant (B) comprises a polyphenylene oxide-series resin and/or a polyphenylene sulfide-series resin (B1), a phosphoric ester (B2), and a nitrogen-containing cyclic compound (B3) (which may be a polyphosphate of an amino group-containing triazine compound). See the reference at col. 2, line 21 through col. 3, line 50.

In order to further impart flame retardancy to the composition, the flame-retardant resin composition of the patented invention may comprise a second flame retardant (E3), which may

Art Unit: 1796

be, for example, a nitrogen-containing flame retardant (E3a). The (E3a) nitrogen-containing flame retardant includes a urea compound (a non-cyclic urea compound, a cyclic urea compound), and guanidine compound. The cyclic monoureide, may be barbituric acid, 5,5-diethylbarbituric acid or a derivative thereof. See col. 17, line 64 through col. 18, line 5 and col. 25, line 55 through col. 26, line 34.

The amine-series antioxidant includes a hindered amine, such as 2,2,6,6-tetramethylpiperidine. The flame-retardant resin composition of the patented invention may comprise other additive(s) for any purpose. As other additive(s), there may be mentioned a stabilizer (e.g., an ultraviolet ray absorbing agent, a heat stabilizer, a weather (light)-resistant stabilizer), a lubricant, a mold-release agent (releasing agent), a coloring agent (colorant), a plasticizer, nucleating agent, an impact resistance improver (impact modifier), a slip-friction/wear) improving agent, a filler (e.g., an organic fiber having a high melting point, such an aliphatic or aromatic polyamide, an aromatic polyester, a fluorocarbon resin, and an acrylic resin such as a polyacrylonitrile), and others. Weather or (light)-resistant stabilizers are conventionally hindered amine compounds. The additives of the patented invention are employed in a conventional manner. Therefor, the ordinary practitioner in this art would have been well apprised of the appropriate amounts of these additives to use, particularly in relation to the amounts suggested for the other components of the invention. See col. 31, lines 50-67.

The patented invention may include metal oxide includes, for example, molybdenum oxide, tungstic oxide, titanium oxide, zirconium oxide, tin oxide, copper oxide, zinc oxide, aluminum oxide, nickel oxide, **iron oxide**, manganese oxide, antimony trioxide, antimony tetraoxide, antimony pentaoxide, and others. See col. 24, lines 35-41.

Art Unit: 1796

Each component of the presently claimed invention is disclosed by Harashina et al. It would have been obvious to one of ordinary skill in the art at the time of appellant's invention to combine any of the suggested components of the patented disclosure into the patented formulations with the expectation of achieving highly flame-retardant polyester compositions. Appellant's elected species of hindered amine additive and barbituric acid is clearly set forth by the reference. Barbituric acid is plainly disclosed as a suitable flame retarding additive. Because it is structurally analogous to the barbituric acid of applicant's claims, it is expected that the barbituric acid of the patented invention would possess equivalent properties, absent a clear showing of unexpected results attributable to some structural or processing characteristic of the barbituric acid component. Therefore the barbituric acid of Harashina et al possesses the inherent functionality of being capable of reacting with acetaldehyde to form a new carbon to carbon bond, since a component and its concurrent function are inseparable.

The incorporation of a conventional "post consumer recycled material" into the compositions of Harashina et al, as opposed to a virgin material, to reduce production costs would have been an obvious variation to the art-skilled at the time of this invention.

### ***Response to Arguments***

Appellant's arguments presented in the Appeal Brief filed 12/4/2007 have been fully considered but they are not persuasive. Appellant has amended the elected claims to utilize the term, "consisting essentially of" in lieu of the term, "comprising". Appellant argues that in view of this more "closed" terminology, the flame retardant materials and inorganic fillers treated with a novolak epoxy resin, as specified in the '677 reference,

Art Unit: 1796

would materially change the presently claimed polyester composition and therefore are outside of the scope of the presently claimed invention. This argument is not persuasive because appellant's amendment introducing the language, "consisting essentially of", serves to omit various components from the presently claimed invention, but also serves to omit the concurrent functions of these components. The omission of a component and its concurrent function is not inventive, but is considered an obvious variation over the prior art reference. It therefore would have been obvious to the ordinary practitioner of this art at the time of appellant's invention to formulate a polyester composition containing barbituric acid as disclosed by Harashina et al and omit any additional coadditives if the concurrent functions of these co-additives were not desired at the time of formulation.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness

or nonobviousness.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Application/Control Number: 10/659,225  
Art Unit: 1796

Page 8

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